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Item: 3155

INFORMATION COLLECTION REQUEST

SUPPORTING STATEMENT

1. Identification of the Information Collection

1(a) - Title and Number of the Information Collection

The title of this information collection is the Premanufacture Review and Exemption Requirements for certain microbial products of biotechnology. The EPA tracking number is 574.

1(b) - Short Characterization

The Environmental Protection Agency (EPA) has been operating the Premanufacture Notice (PMN) review program (now referred to as the New Chemicals Program), since July 1, 1979. OMB approval for this information collection was granted under OMB No. 2070-0012. This request is for an amendment to the existing ICR to: (1) collect information on new microorganisms manufactured for general commercial use, and certain new microorganisms used for research and development (R&D); (2) reduce reporting requirements for certain categories of new microorganisms; and (3) to require recordkeeping demonstrating compliance with conditions of certain exemptions for new microorganisms. While the existing ICR covered the basic reporting requirements for traditional chemical substances, the discussion below outlines those requirements for a complete understanding of EPA's new microorganism program.

OMB reviewed and disapproved the draft ICR which accompanied the proposed rule (59 FR 45526 (September 1, 1994)). OMB cited three reasons for its disapproval. First, EPA had not calculated the burdens associated with a low risk alternative for which public comment was sought in the proposed rule. Second, OMB requested that EPA examine the need to keep records

for the selection and use of containment and inactivation procedures given the supervision requirements by a technically qualified individual (TQI). Lastly, OMB stated that EPA should include its best estimate of the burden associated with potential regulatory restrictions. EPA has responded to these points in the attachment to this document.

2. Need for and Use of the Collection

2(a) - Need/Authority for the Collection

(i) Notices on New Substances and Significant New Uses

Section 5(a)(1) of the Toxic Substances Control Act (TSCA) 15 U.S.C. 2604, requires manufacturers and importers of new substances to submit to the Administrator of EPA notice of intent to manufacture or import a new substance 90 days before manufacture or import begins. Section 5(a)(1) also requires notification from any person who proposes to manufacture or process a substance for a use which has been determined to be a significant new use. The notice must include, insofar as it is known to or is reasonably ascertainable by the submitter, information described in Section 8(a)(2) of the Act (e.g., identity, use, and exposure data), plus test data and descriptions of other data related to the effects on health and the environment of the manufacture, processing, use, distribution in commerce, and disposal of the new substance (Section 5(d)). EPA reviews the information to evaluate the health and environmental effects of the new substance. On the basis of the review, EPA can take further regulatory action under Sections 5(e) and 5(f) of the Act, if warranted. If EPA takes no action at the end of 90 days, the submitter is free to manufacture or import the new substance without restriction.

In its 1986 Policy Statement on microbial products subject to the Federal Insecticide, Fungicide and Rodenticide Act and TSCA (51 FR 23313, June 26, 1986), EPA clarified that living

organisms, including microorganisms, were considered chemical substances under TSCA. The 1986 Policy Statement defined "new" microorganisms for purposes of Section 5 of TSCA as those formed by deliberate combinations of genetic material from organisms in different genera (intergeneric microorganisms). EPA is retaining the 1986 definition of "new" microorganism.

To improve the clarity of the regulations and minimize confusion between the notification requirements for microorganisms and other chemical substances, EPA is adding a new Part 725 to the CFR to cover microorganisms. The Section 5 notification for a microorganism will be called a Microbial Commercial Activity Notice (MCAN) instead of a PMN. A separate notification for R&D field trials will be called a TSCA Experimental Release Application (TERA).

Section 5(e) authorizes EPA to regulate the manufacture, processing, distribution in commerce, use, or disposal of a new chemical substance pending development of data sufficient to evaluate the health and environmental effects of the substance. EPA may take action under Section 5(e) if the Agency determines that the information available is insufficient to evaluate that substance and that the substance either (1) may present an unreasonable risk of injury to health or the environment, or (2) will be produced in substantial quantities and there may be significant or substantial exposure to the substance. Under its current biotechnology program, implemented under the 1986 Policy Statement, EPA has generally used Section 5(e) Orders to limit the use of intergeneric microorganisms intended for introduction into the environment to small scale field applications.

This rule package also contains procedures for expedited issuance of Significant New Use Rules (SNURs), modeled after procedures promulgated for traditional chemical substances (40 Part 721). Significant New Use Rules (SNURs) are authorized under Section 5(a)(2) of TSCA.

EPA uses this authority to take follow-up action on new or existing substances that may not present an unreasonable risk in their present uses, but may present an unreasonable risk should other uses occur which may result in different and/or higher exposures to human beings or the environment.

These procedures would enable EPA to universalize quickly any Section 5(e) restrictions on uses of new microorganisms that are imposed on an MCAN submitter, facilitating consistent coverage across the industry. Despite promulgating these expedited SNUR procedures at this time, the Agency is not promulgating any specific SNURs in this rule.

(ii) Test-Marketing Exemptions

Under TSCA Section 5(h)(1), persons may apply for an exemption from the requirements of Section 5 for test-marketing purposes. EPA may grant the exemption if it finds that the test-marketing activities described by the applicant will not present an unreasonable risk of injury to health or the environment. The applicant must provide the information necessary to make this finding and EPA must grant or deny the exemption within 45 days. If EPA grants the exemption, it may impose appropriate restrictions on the test-marketing activities.

Although there is no specific information required to submit a test-marketing exemption, and applicants need not use the PMN form, the rule states that the applicant should include any available toxicity data and describe the planned test-marketing activities and the expected exposures. The Agency retains the right to declare the application as containing insufficient information upon which to make an evaluation. Any person who receives a test-marketing exemption must retain documentation of any information in the exemption application and documentation of their compliance with any restrictions imposed by EPA when it granted the

application.

Persons who wish to manufacture new microorganisms for test-marketing purposes will be eligible for this exemption. Specific guidance has been provided in the rule on the type of information the Agency will need to make a decision on this activity.

(iii) R&D activities in "contained structures" such as laboratories, greenhouses, and fermentors

Section 5(h)(3) of TSCA exempts from reporting small quantities of chemical substances used only for R&D purposes. EPA's small quantities regulations are published at 40 CFR §720.36. Persons using the exemption must have the research overseen by a technically qualified individual and notify any person involved in the research of any risk.

In the 1986 Policy Statement, EPA announced that introduction of intergeneric microorganisms into the environment for research purposes does not fall within the small quantities exemption for R&D. EPA requested that persons intending to introduce new microorganisms into the environment for R&D purposes voluntarily submit a PMN to EPA.

The small quantities exemption was preserved for persons using intergeneric microorganisms for R&D in contained structures, such as laboratories, greenhouses, and fermentors.

These regulations contain revisions to the existing requirements for R&D. Persons who are performing research in contained structures will continue to be eligible for the small quantities exemption. Persons wishing to introduce new microorganisms for R&D in the environment must submit a TERA as outlined below, unless EPA has determined under Section 5(h)(4) that the microorganisms involved are exempt from notification.

(iv) Section 5(h)(4) Exemptions

Section 5(h)(4) of TSCA authorizes EPA to exempt any manufacturer of a chemical substance from all or part of the provisions of Section 5 if it is determined that the substance will not present an unreasonable risk of injury to health or the environment when manufactured, processed, distributed, used, or disposed of under the exemption. To date three rules have been promulgated under this Section: the low volume exemption (40 CFR § 723.50), the polymer exemption (40 CFR § 723.250), and the exemption for instant photographic film articles (40 CFR § 723.175). These rules reduce reporting requirements, providing relief to submitters from the burdens of the full PMN reporting requirements. None of these exemptions are applicable to living microorganisms. However, the Agency is proposing four additional Section 5(h)(4) exemptions for certain uses and types of microorganisms. These exemptions are summarized below.

EPA is proposing a complete exemption under TSCA section 5(h)(4) for research on new microorganisms eligible for the small quantities exemption, if the researcher is required to comply with the NIH Guidelines. Research subject to TSCA may also be funded by Federal agencies. In 1983, all Federal agencies agreed to require compliance with the NIH Guidelines as a condition for Federal funding of rDNA laboratory research. EPA considers the NIH Guidelines to provide the primary standard for laboratory research. EPA's rules are designed to provide complementary oversight of those activities not covered by NIH. The exemption is based on the general policy that TSCA should not apply to research adequately overseen by other Federal authorities.

In the 1986 Policy Statement, EPA stated its intention to require notification prior to any research with intergeneric microorganisms or certain engineered pathogens involving

environmental release. Pending promulgation of final regulations, EPA has been receiving voluntary notifications. This final rule establishes new limited notification requirements for persons wishing to field test a "new" microorganism. (EPA is not requiring notification for engineered pathogens.)

Under this exemption, persons wishing to field test a new microorganism must submit a TERA to EPA. EPA will generally complete its review within 60 days, although the review period may be extended for an additional 60 days. Unlike a PMN, a researcher does not have to await the termination of the entire review period. If EPA completes its review before the 60th day, for example, the field test may begin as soon as the company receives notification. If EPA approves the TERA, it may impose appropriate limitations on the field test activities. Applicants are required to

retain records of relevant data for three years after its preparation. Statements regarding sites, use, and exposure controls are legally binding on the submitter.

Additionally, EPA is using its authority under Section 5(h)(4) to list two categories of microorganisms whose use in the environment for R&D purposes will not be subject to EPA review if certain conditions are met. Under the exemption, researchers must submit a simple certification statement, which ensures compliance with the conditions of the exemption. EPA expects the list of microorganisms eligible for the exemption to expand over time as the Agency acquires greater experience with other categories of microorganisms introduced into the environment.

In the 1986 Policy Statement, EPA also announced its intention to consider exempting microorganisms manufactured in contained systems for general commercial use. EPA has included

a tiered exemption system in this final rule to allow reduced reporting for certain categories of microorganisms when used in a manner that limits releases of these microorganisms. For microorganisms used under the Tier I exemption, a simple certification statement is required the first time the exemption is used. This certification is needed to develop a list of companies using this exemption, and to ensure compliance with the conditions of the exemption. No EPA review is required prior to manufacture of the exempt microorganisms.

For microorganisms used under the Tier II exemption, companies are required to submit an application. EPA has 45 days to complete its review, which will focus on the containment methods used. If the application is approved, EPA may impose appropriate restrictions on the activities. Applicants are required to retain records of relevant data for three years. Statements regarding sites, use, and exposure controls would be legally binding on the submitter. EPA expects the list of microorganisms eligible for the Tier I and Tier II exemptions to expand over time.

2(b) - Use/Users of the Data

Section 5 of TSCA gives EPA authority to review new chemical substances prior to their manufacture, importation, or processing in the United States, in order to determine whether such substances may present an unreasonable risk of injury to health or the environment. To make a reasoned evaluation of the risk associated with these substances, EPA needs data on each substance's structure (or genetic make-up); physical, chemical, genetic or phenotypic properties; its manufacturing process; worker exposure; environmental release; production volume; potential industrial, commercial, and consumer use; and test data related to the substance. EPA needs sufficient information for it to identify substances with analogous structures, properties or

behaviors, with similar manufacturing processes, and with similar uses. The Agency reviews the available data to evaluate the effects and potential for transfer of genetic material of the substance and the potential risk resulting from human and environmental exposure. If EPA is considering regulation of the substances, the Agency also evaluates the benefits of the substance to determine what regulatory action, if any, to take.

On the basis of its initial review, EPA eliminates the vast majority of new chemical substances from further review. EPA may identify a minority of new chemical substances for more detailed evaluation for which additional exposure or effects data may be needed; identify some substances for follow-up reporting on their commercial development; or select a limited number for immediate regulatory action. Through this process, EPA minimizes the burden on both the Agency and industry by requiring detailed information only on those substances which the Agency determines may present an unreasonable risk of injury to health or the environment.

3. The Respondents and the Information Requested

3(a) - Respondents/SIC Codes

Information will be collected from manufacturers of new microorganisms, and from persons using such microorganisms in research and development (R&D) for commercial purposes. These respondents are included in SIC codes 147, 281, 282, 284, 285, 286, 289, 291, 386.

3(b) - Information Requested

(i) - Data Items

(a) Traditional Chemical Substances

A 90-day advance notice to EPA under Section 5 of TSCA is required of persons who manufacture or import new substances or who manufacture, import, or process any substance for

a significant new use. The PMN form requires certain information to the extent it is known to or is reasonably ascertainable by the submitter. This includes information on identity, impurities, synonyms or trade names, byproducts, production volume, and categories of use by function and application. The submitter also must provide certain information on exposure and release at manufacturing and processing sites, as well as a process description. The specific information requirements are spelled out on the PMN form itself and in the Instructions Manual.

EPA has limited the level of detail of information required in the PMN form to that which is necessary to conduct an initial review of a chemical. However, submitters may include optional information in their notices which they believe EPA should consider in its reviews. Submitters are encouraged to provide information on the benefits of the new substance in comparison to existing chemical substances, information on the substitutes, and any additional information available to them on waste management techniques.

(b) Microorganisms

EPA is not requiring the use of a specific form for microbial submissions under Section 5 of TSCA. The specific information requirements are spelled out in the regulatory text and in the Agency's Points to Consider guidance document. Submitters of notices for new microorganisms are required to provide certain information to the extent it is known to or is reasonably ascertainable by them. This includes information specific to microorganisms, including microorganism identity and introduced genetic material. Some information requirements are identical to those for traditional chemical substances, such as byproducts, production volume, and categories of use by function and application. The submitter also must provide certain information on exposure and release at manufacturing and processing sites, as well as a process description.

As in the case of traditional chemical substances, EPA is encouraging submitters to provide other information in their notices which they believe EPA should consider in its review. Likewise, submitters are permitted to explain why certain types of requested information are unavailable or unnecessary.

(c) Test Market Exemptions

Test-marketing exemption applicants are not currently required to use any prescribed reporting form. However, the PMN rule recommends they provide the following information: (1) All existing health and environmental effects data on the chemical or a discussion of toxicity based on structure-activity relationships and relevant data on chemical analogues; (2) the maximum quantity of the chemical substance that the applicant will manufacture or import for test-marketing purposes; (3) the maximum number of persons who may be provided the chemical substance during test-marketing; (4) the maximum number of persons who may be exposed to the chemical substance as a result of test-marketing, including information regarding the duration and route of such exposure; and (5) a description of the test-marketing activity, including its length and how it can be distinguished from full-scale commercial production and research and development. Identical requirements (with changes only to make the questions appropriate for microorganisms) are applicable for test marketing applications involving microorganisms.

(d) Small Quantities

As noted above, persons using small quantities of traditional chemical substances for R&D purposes are not subject to the notification requirements of Section 5. Similarly, there are no reporting requirements for persons who are doing research with new microorganisms in contained structures such as laboratories, greenhouses, or fermentors, and who comply with the conditions

of the small quantities exemption set forth in the regulatory text. The use of a new microorganism under the conditions of the small quantities exemption must be supervised by a technically qualified individual. In addition, persons are required to keep records of the selection and use of containment and inactivation procedures used, and any notifications to employees regarding potential risk to health associated with the microorganism.

(e) Section 5(h)(4) Exemptions

The Section 5(h)(4) exemptions have the following reporting requirements:

1. Persons whose research qualifies for the small quantities exemption and is subject to the jurisdiction of another lead Federal agency which requires compliance with the NIH Guidelines have no reporting requirements under TSCA.

2. Persons whose research qualifies for the small quantities exemption and is not subject to the jurisdiction of another lead Federal agency are required to comply with the conditions of 40 CFR §§ 720.234 and 235.

3. Persons whose research does not qualify for the small quantities exemption in (d) above have the following requirements:

(i). Persons whose research qualifies for an exemption from TERA reporting must submit a certification that all the criteria for the exemption are met.

(iii). Persons whose research does not qualify for other research exemptions must submit a TERA. Applicants submitting a TERA are required to provide the following information: (a) microorganism identity, (b) a description of the R&D activity, (c) information on monitoring, mitigation, and emergency procedures, and (d) health and environmental effects data.

4. Persons manufacturing new microorganisms for general commercial use who qualify

for the Tier I exemption need to submit a one-time certification that all the criteria for the exemption are met.

5. Persons who qualify for the Tier II exemption need to submit an application for limited review. Information in the application includes: (a) microorganism identity; (b) production volume; and (c) process and containment information.

(ii) - Respondent Activities

In compiling and maintaining the required information, the respondents:

(1) read a regulatory provision;

(2) determine which provisions are applicable to their activities;

(3) gather information necessary to meet requirements;

(4) substantiate any claims of confidential business information;

(5) if needed, submit a notice to EPA;

(6) comply with any restrictions EPA may impose at the completion of any review; and

(7) maintain necessary records.

4. The Information Collected -- Agency Activities, Collection Methodology, and Information Management

4(a) - Agency Activities

In connection with this regulatory program, the Agency will:

(1) review notice submissions;

(2) take regulatory action as appropriate;

(2) file and store notice submissions;

(3) analyze requests for confidentiality and provide appropriate protection; and

(4) conduct site and records inspections.

4(b) - Collection Methodology and Management

The existing PMN form is not appropriate for reporting of new microorganisms because the form is designed with traditional chemical substances in mind. The Agency has developed a Points to Consider guidance document to assist submitters in providing EPA with the information necessary to complete assessments of new microorganisms under Section 5 of TSCA. The submitter will be able to respond in a format of his or her own choosing.

4(c) - Small Entity Flexibility

Manufacturers, importers, and processors of new chemical substances are required to pay fees for PMNs, certain PMN exemption applications and notices, and Significant New Use Notices (SNUNs) submitted under TSCA Sections 5(a) and 5(h). Small business concerns are permitted to

submit a reduced fee of $100 (rather than $2,500) for each Section 5 notice submitted pursuant to the user fee regulations at 40 CFR § 700.45(a)(1).

For microbial submissions, a fee would be charged only for MCANs. Small businesses would be eligible for the same reduced fees cited above. There is no charge for TERA submissions.

4(d) - Collection Schedule

The frequency of the submission of data under Section 5 of TSCA is not under the Agency's control. TSCA requires notice 90 days prior to manufacture or import of a new chemical substance, or manufacture, import, or processing of a chemical substance for a significant new use. Under these regulations, a MCAN is required to be submitted 90 days before

manufacture or import of a new microorganism, a TERA is required 60 days before a planned environmental release of a nonexempt microorganism for research purposes, and a Tier II exemption application is required 45 days before manufacture or import of a new microorganism.

5. Nonduplication, Consultations, and Other Collection Criteria

5(a) - Nonduplication

EPA is the only agency that collects information on new chemical substances (including microorganisms) manufactured for general commercial use. New chemical substances which are intermediates in the production or manufacture of food, food additives, drugs, cosmetics, or devices are subject to the jurisdiction of the Food and Drug Administration. New chemical substances which are intermediates in the manufacture of pesticides are subject to TSCA.

5(b) - Consultations

EPA has published in coordination with other Federal agencies, two policy statements (49 FR 50880 (December 31, 1984), and 51 FR 23313 (June 26, 1986)) which comprise part of the Coordinated Framework for Regulation of Biotechnology, and a request for comment (54 FR 7027 (February 15, 1989)) to gather information from interested parties on how TSCA should be used to regulate microorganisms. EPA has also used public meetings of its Biotechnology Science Advisory Committee (BSAC) to gather additional comments and to address issues in the context of specific notifications submitted to the Agency. EPA has published the proposed regulations for microbial products of biotechnology under TSCA (59 FR 45526, September 1, 1994) for public comment.

5(c) - Effects of Less Frequent Collection

Manufacturers of new chemical substances typically submit a PMN 90 days prior to manufacturing or distributing the substance for general commercial use. Subsequent reporting would only be required if EPA determined that a specific use of the substance constituted a significant new use. However, in the case of microorganisms, delaying reporting until a microorganisms is ready to be widely distributed in commerce may lead to an unreasonable risk to human health or the environment. Once a microorganism enters the environment it may reproduce and spread beyond the area of initial introduction. For this reason EPA has determined that it is necessary to require reporting before any field release of new microorganisms for R&D purposes, unless the microorganisms involved have been specifically exempted. Manufacturers of microorganisms that are released to the environment may eventually report to EPA more than once. At the time of the initial R&D field release, a person may submit a TERA. While TERAs

offer the advantages of a shorter review period, microorganisms reviewed through TERAs are not placed on the TSCA Inventory. Thus, manufacturers of microorganisms who submit TERAs at the R&D stage must submit MCANs if and when they manufacture the microorganism for general commercial use.

5(d) - General Guidelines

No PRA-imposed guidelines are exceeded.

5(e) - Confidentiality and Sensitive Questions

(i) - Confidentiality

The confidentiality of collected information will be maintained pursuant to the provisions of TSCA, 15 U.S.C. §2613.

(ii) - Sensitive Questions

Not applicable. No information of a sensitive or private nature is required in conjunction with this program.

6. Estimating the Burden and Cost of the Collection

[6(a) & (b)] - Estimating Respondent Burden and Costs

To estimate incremental burden and costs, estimates of the costs associated with each reporting and documentation format under the final rule and under current policy were required. Worksheets 1 through 6 present these calculations. Worksheets 1 through 4 present estimates of burden and costs associated with reporting and exemption documentation formats; and worksheets 5 and 5A present estimates associated with reporting under current policy. These worksheets reflect average burden estimates, which were calculated based on the data found in the cost component tables (Appendix D, Tables D-3 through D-10) and Confidential Business Information

(CBI) substantiation cost estimation tables (Appendix E, Tables E-2 through E-5) contained in Volume II

of the Regulatory Impact Analysis. Only time and effort over and above that which would normally be expended for scientific purposes was tabulated.

For example, to estimate the average annual burden associated with information gathering activities in connection with submission of the MCAN, tabulated on Worksheet 1, low-bound and high bound burden estimates were obtained from tables D-5 and D-6, respectively. Estimates of review and submission burden, including clerical preparation, managerial review, and write-up, were also obtained from these tables and averaged. In most cases, no additional effort was estimated to be required to gather information, as indicated by a "0" in the "Percent of Costs" column in the tables. Tables E-3 (high bound estimate) and E-4 (low bound estimate) were used to calculate average burden for substantiating CBI claims.

Costs in Worksheets 1 through 5A are expressed in 1987 dollars (costs are calculated by multiplying burden hours by 1987 wage rates for each respective labor category, then totalling results across all categories). For the purposes of expressing total incremental costs, estimates are also expressed in 1995 dollars below (see Table IV).

WORKSHEET 1 - RESPONDENT BURDEN ESTIMATE PER SUBMISSION

MICROBIAL COMMERCIAL ACTIVITIES NOTIFICATION (MCAN)

Collection Activities	Burden Hours per Submission (Avg.)						Costs
	Mngmt.	Legal	Sr. Prof.	Jr. Prof.	Res. Tech.	Clerical	
(1) Gather Info.	11.1		39.8	56.0	61.6		$9,661
(2) Substantiate CBI	3.5	5.3	3.0	11.8		2.3	$1,816
(3) Review/Submit Notice	14.0			120.0		14.0	$8,303
(4) Restrictions							$0
(5) Maintain Records							negligible
Total Average Cost per Submission							$19,780

WORKSHEET 2 - RESPONDENT BURDEN ESTIMATE PER SUBMISSION

TSCA EXPERIMENTAL RELEASE APPLICATION

Collection Activities	Burden Hours per Submission (Avg.)						Costs
	Mngmt.	Legal	Sr. Prof.	Jr. Prof.	Res. Tech.	Clerical	
(1) Gather Info.	15.6		99.1	144.5	114.6		$21,419
(2) Substantiate CBI	2.5	3.0	3.8	7.0		1.8	$1,262
(3) Review/Submit Notice	14.0			120.0		14.0	$8,303
(4) Restrictions					3,120.0 <a>		$43,750
(5) Maintain Records							negligible
Total Average Cost per Submission							$74,734

<a> Burden estimate reflects costs associated with 1 additional research technician working full time (2,080 hrs.) at an annual rate of $20,000 and 1 additional doctoral researcher working half-time (1,040 hrs.) at an annual rate of $40,000. (Estimate reflects scenario where research is performed in an academic setting.)

WORKSHEET 3 - RESPONDENT BURDEN ESTIMATE PER SUBMISSION

TIER II EXEMPTION

Collection Activities	Burden Hours per Submission (Avg.)						Costs
	Mngmt.	Legal	Sr. Prof.	Jr. Prof.	Res. Tech.	Clerical	
(1) Gather Info.							$0
(2) Substantiate CBI	3.5	5.3	3.0	11.8		2.3	$1,816
(3) Review/Submit Notice	14.0			120.0		14.0	$8,303
(4) Restrictions							$0
(5) Maintain Records							negligible
Total Average Cost per Submission							$10,119

WORKSHEET 4 - RESPONDENT BURDEN ESTIMATE FOR CONTAINED STRUCTURES EXEMPTION

Collection Activities	Burden Hours per Submission (Avg.)						Costs
	Mngmt.	Legal	Sr. Prof.	Jr. Prof.	Res. Tech.	Clerical	
(1) Gather Info.					0.4		$16
(2) Substantiate CBI	N/A	N/A	N/A	N/A	N/A	N/A	$0
(3) Review/Submit Notice	0.4						$39
(4) Restrictions<a>					0.8		$32
(5) Maintain Records							negligible
Total Average Cost per Submission							$87

<a> Verification of use of selected containment procedures may be necessary in 5% of the labs performing research covered by the rule.

WORKSHEET 5 - RESPONDENT BURDEN ESTIMATE PER SUBMISSION

PREMANUFACTURE NOTIFICATION UNDER CURRENT POLICY - CLOSED SYSTEM APPLICATION

Collection Activities	Burden Hours per Submission (Avg.)						Costs
	Mngmt.	Legal	Sr. Prof.	Jr. Prof.	Res. Tech.	Clerical	
(1) Gather Info.	11.1		40.3	58.0	47.2		$9,189
(2) Substantiate CBI<a>	3.5	6.0	5.0	14.8		2.5	$2,206
(3) Review/Submit Notice	14.0			120.0		14.0	$8,303
(4) Restrictions							$0
(5) Maintain Records							negligible
Total Average Cost per Submission							$19,698

<a> Assumed to be equivalent to burden associated with filing MCAN.

WORKSHEET 5A - RESPONDENT BURDEN ESTIMATE PER SUBMISSION

PREMANUFACTURE NOTIFICATION UNDER CURRENT POLICY - ENVIRONMENTAL APPLICATION

Collection Activities	Burden Hours per Submission (Avg.)						Costs
	Mngmt.	Legal	Sr. Prof.	Jr. Prof.	Res. Tech.	Clerical	
(1) Gather Info.<a>	33.8		205.4	260.0	47.2		$41,761
(2) Substantiate CBI<b>	3.5	6.0	5.0	14.8		2.5	$2,206
(3) Review/Submit Notice	14.0			120.0		14.0	$8,303
(4) Restrictions	<c>	<c>	<c>	<c>	<c>	<c>	<c>
(5) Maintain Records							negligible
Total Average Cost per Submission							$52,270

WORKSHEET 5A - RESPONDENT BURDEN ESTIMATE PER SUBMISSION

PREMANUFACTURE NOTIFICATION UNDER CURRENT POLICY - ENVIRONMENTAL APPLICATION

<a> Burden estimates increased by a factor of 100% to capture three (3) prior field tests (field tests assumed to be performed prior to filing the PMN).

<b> Assumed to be equivalent to burden associated with filing MCAN.

<c> The Agency has no basis to estimate potential burden, as it would be highly dependent upon case-specific factors such as type of microorganism, intended use, and quality of data included in PMN.

[6 (c)] - Estimating Agency Burden and Cost

To calculate incremental burden and costs, estimates of the costs associated with each reporting or documentation format under both the preferred option and current policy were required. Worksheet 6 presents estimates associated with Agency review of each format. This worksheet reflects average burden estimates for year five. These estimates were calculated by first averaging the "total review time" presented in Table V-3, (page V-12) of Volume I of the Regulatory Impact Analysis. To these averages, a factor of 0.75 was then applied to relect the efficiencies assumed to be gained in connection with the Agency's long-term administration of the biotechnology program. Costs in Worksheet 6 are also expressed in 1987 dollars.

WORKSHEET 6 - AGENCY BURDEN ESTIMATES PER SUBMISSION

Collection Activities	Burden Hours per Submission (Avg.)				
	MCAN/TME	TERA	TERA foll.-on	Tier I	Tier II
(1) BSAC Review<b> (TERAs Only)					
(2) Agency Review	799.9	1,107.0	369.0	40.0	240.0
(3) Action to Regulate<c>					
(4) Confidentiality Analysis<c>					
TOTAL COSTS<d>	$33,918	$51,836	$15,647	$1,696	$10,175

<a> All burden estimates represent year five.

<b> Hours not estimated. Costs to EPA associated with Biotechnology Science Advisory Committee review include consulting fees ($270/attendee); travel ($350/attendee); meeting room fee ($930/attendee); and court reporter ($1,000). Total costs per review were estimated to average $4,895 and have been included in total cost estimate for TERAs.

<c> Burden accounted for in item (2).

<d> Costs estimated based on fully-loaded rate at the GS-12 level ($42.40/hr.).

[6 (d)]

Tables I through V incorporate the unit burden and cost estimates calculated in Worksheets 1 through 6. Table I presents the annual costs of reporting as would be incurred under the final rule. Rule familiarization costs are also presented, as both one-time and annual costs.

In Table II, annual costs estimated to be incurred in absence of the rule are presented. These costs are associated with reporting required under the Agency's current policy under TSCA for oversight of biotechnology.

Table III presents costs to the government associated with oversight under both the final rule and current policy.

In Tables IV and V, annual increments are presented. Table IV presents costs, in both 1987 and 1995 dollars, and increments are calculated from both the industry and government perspectives. In Table V, burden increments are presented, also from both the industry and government perspectives.

TABLE I

Industry Costs - Final Rule

Reporting Costs

Type of Notice	Avg. Cost	User Fee	Annual Units<a>	Annual Costs
MCAN	$19,780	$2,500	6	$133,681
Exemptions				
Contained Str.<b>	$57	$0	164	$9,292
TERA	$74,734	$0	6	$448,402
TERA Mod.<c>				
(Follow-on)	$24,911	$0	18	$448,402
TME	$19,780	$0	0	$0
Tier I<d>	$1,300	$0	12	$15,600
Tier II	$10,119	$0	12	$121,428
Total Annual Reporting Costs (Average)				$1,176,806

Rule Familiarization Costs

One-time Cost<e>	$1,179,247
Annualized Cost<f>	$423,139

<a> Unit counts represent year five totals.

<b> Average costs for item (4), Restrictions, from Worksheet 4 were included for 5% of facilities performing research covered by the rule (14 sites).

<c> Average cost estimated to be 1/3 that estimated for the TERA.

<d> Average costs include 12.5 hours of management time.

<e> Costs incurred for rule familiarization apply to each facility affected by the rule. Costs were estimated thus:

(average burden) x (unit labor cost) x (affected facilities)

where

average burden = 30 hrs.; unit labor cost = $103.99 (man./leg. time; and no. of affected facilities = 378.

<f> First-year rule familiarization costs annualized at 3% over 3 years. Recurring costs estimated based on 3 new entrants, annually.

TABLE II

Industry Costs - Current Policy

Type of Notice	Avg. Cost	User Fee	Annual Units<a>	Annual Costs
PMN/Closed System	$19,697	$2,500	28	$621,516
PMN/Environmental	$52,269	$2,500	2	$109,538
Total Annual Reporting Costs (Average)				$731,054

<a> Unit counts represent year five totals.

TABLE III

Agency Costs

Final Rule

Type of Notice	Avg. Cost	User Fee	BSAC Review <c>	Annual Units<a>	Annual Costs
MCAN	$33,918	$2,500	$0	6	$188,507
Exemptions					
TERA	$46,941	$0	$4,895	6	$306,121
TERA Mod.<c> (Follow-on)	$15,647	$0	$0	18	$281,646
TME	$33,918	$0	$0	0	$0
Tier I<d>	$1,696	$0	$0	12	$20,351
Tier II	$10,175	$0	$0	12	$122,104
Total Annual Review Costs (Average)					$918,729

Current Policy

PMN/Closed System<d>	$33,918	$2,500	$0	28	$879,698
PMN/Environmental	$46,941	$2,500	$4,895	2	$98,672
Total Annual Review Costs (Average)					$978,370

<a> For final rule, average costs obtained from Worksheet 6 above.

<b> Unit counts represent year five totals.

<c> For final rule, BSAC review estimated to be required in 5 of 6 cases.

<d> Agency review costs associated with closed-system and environmental PMN submissions assumed to be equivalent to review costs associated with filing of MCAN and TERA, respectively.

TABLE IV - INCREMENTAL COSTS ($1987)

Final Rule

Type of Notice	Annual Units<a>	Annual Costs to Industry	Annual Costs to Agency
MCAN	6	$133,681	$188,507
Exemptions			
Contained Str.	164	$9,292	$0
TERA	6	$448,402	$306,121
TERA Mod. (Follow-on)	18	$448,402	$281,646
TME	0	$0	$0
Tier I	12	$15,600	$20,351
Tier II	12	$121,104	$122,104
Ann. Rule Fam.		$423,139	
RULE TOTAL		$1,599,621	$918,729
CURR. POLICY TOTAL		$731,065	$978,370
INCREMENT		$868,556	($59,641)

Current Policy

Type of Notice	Annual Units<a>	Annual Costs to Industry	Annual Costs to Agency
PMN			
Closed System	28	$621,527	$879,698
Environmental	2	$109,538	$98,672
CURR. POLICY TOTAL		$731,065	$978,370
RULE TOTAL		$1,599,621	$918,729
INCREMENT		($868,556)	$59,641

<a> Unit counts represent year 5 totals.

TABLE IV (cont'd) - INCREMENTAL COSTS ($1995)

Final Rule

Type of Notice	Annual Units<a>	Annual Costs to Industry	Annual Costs to Agency
MCAN	6	$181,271	$255,615
Exemptions			
Contained Str.	164	$12,600	$0
TERA	6	$608,034	$415,101
TERA Mod.			
(Follow-on)	18	$608,034	$381,912
TME	0	$0	$0
Tier I	12	$21,154	$27,596
Tier II	12	$164,217	$165,573
Ann. Rule Fam.		$573,776	
RULE TOTAL		$2,169,086	$1,245,797
CURR. POLICY TOTAL		$991,325	$1,326,669
INCREMENT		$1,177,761	($80,872)

<a> Unit counts represent year 5 totals.

Current Policy

Type of Notice	Annual Units<a>	Annual Costs to Industry	Annual Costs to Agency
PMN			
Closed System	28	$842,791	$1,192,870
Environmental	2	$148,534	$133,799
CURR. POLICY TOTAL		$991,325	$1,326,669
RULE TOTAL		$2,169,086	$1,245,797
INCREMENT		($1,177,761)	$80,872

TABLE V - ANNUAL REPORTING BURDEN

Final Rule

Type of Notice	Average Annual Responses	Hrs./Response	Annual Burden
MCAN<a>	6	342.3	2,053.8
Exemptions			
Contained Str.	164	0.8	131.2
TERA	6	3,659.8	21,958.8
TERA Mod. (Follow-on)<b>	18	1,219.9	21,958.2
Tier I<c>	12	12.5	150.0
Tier II<a>	12	173.8	2,085.6
Ann. Rule Fam.			4,069.0
RULE TOTAL	218		52,406.6
CURR. POLICY TOTAL			11,222.0
INCREMENT			41,184.6

Current Policy

Type of Notice	Average Annual Responses	Hrs./Response	Annual Burden
PMN			
Closed System<a>	28	336.4	9,419.2
Environmental<a>	2	901.4	1,802.8
CURR. POLICY TOTAL	30		11,222.0
RULE TOTAL			52,406.6
INCREMENT			(41,184.6)

<a> Burden estimates obtained from worksheets 1 through 6 above.

<b> Burden estimated as one-third that estimated for TERA.

[6(e)] - Reasons for Change in Burden

Implementation of the 1986 Policy Statement requiring reporting for certain microorganisms under Section 5 of TSCA.

[6(f)] - Burden Statement

Public reporting burden for this collection of information is estimated to average 190 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

ICB ITEM NO.:

TITLE: Microbial Products of Biotechnology: Final Rule

REQUIRED BY LAW: Yes

COST TO FEDERAL GOVT: $962,018[1]

NO. OF RESPONDENTS: Variable[2]

FREQUENCY OF RESPONSE: Variable

ESTIMATED BURDEN PER RESPONSE: Variable[3]

ANNUAL TOTAL BURDEN (HOURS): 47,973

FREQUENCY OF USE: Annual

DETAILED ABSTRACT:

Section 5 of the Toxic Substances Control Act (TSCA) requires EPA to screen all chemical substances not on the TSCA Inventory of Chemical Substances ("new chemical substances") prior to their introduction into commerce in the United States. As defined in TSCA Section 3(2), a "chemical substance" is "any organic or inorganic substance of a particular molecular identity, including (i) any combination of such substances occurring in whole or in part as a result of a chemical reaction or occurring in nature...." EPA has consistently applied this definition to life forms, including microorganisms, and clarified its position with regard to the applicability of TSCA to microbial products of biotechnology in 1984 ("Proposal for a Coordinated Framework for Regulation of Biotechnology", 49 FR 50856 (December 31, 1984)).

To make a reasoned evaluation of the potential risk which may be associated with a new chemical substance, including a new microorganism, EPA needs data on chemical or molecular

structure; physical, chemical, genetic or phenotypic properties; manufacturing process and production volume; worker exposure; environmental release; and uses of the substance.

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[1]Total Average Annual Reporting Costs

[2]The number of respondents will vary according to the type of submissions.

[3]The estimated burden per response will vary according to the type of submission. The estimated burden will range from 12.5 hours to 3,621 hours.

A specific form is not required for submission of this information for microbial products of biotechnology. The information is entered into the Management Information Tracking System (MITS), a computer data base for tracking submissions under Section 5 of TSCA. Confidential business information is stored in the Confidential Business Information Center and access is controlled.

ATTACHMENT

OMB reviewed and disapproved the draft ICR which accompanied the proposed rule (59 FR 45526 (September 1, 1994)). OMB cited three reasons for its disapproval. First, EPA had not calculated the burdens associated with a low risk alternative for which public comment was sought in the proposed rule. Second, OMB requested that EPA examine the need to keep records for the selection and use of containment and inactivation procedures given the supervision requirements by a technically qualified individual (TQI). Lastly, OMB stated that EPA should include its best estimate of the burden associated with potential regulatory restrictions.

Calculation of Burdens of Low Risk Alternative: EPA had solicited public comment in the proposed rule on an alternative to oversight of environmental R&D which would have allowed a TQI or some other third party to submit a notice to the Agency certifying that the microorganisms to be used in an environmental field trial were eligible for an exemption from review, based on eligibility criteria designed to show that the microorganisms presented low risk. EPA has chosen not to adopt the low risk alternative in the final rule. The Agency plans to further develop this option in a separate rulemaking in the future. Since EPA has not adopted the low risk alternative, there is no need to further examine the potential burden of implementing such an approach.

Recordkeeping for Inactivation and Containment Procedures: In the proposed rule, EPA stated that the low risk alternative "would contain requirements for documentation and recordkeeping by a TQI...." 59 FR 45526, 45536 (September 1, 1994). Such recordkeeping requirements are modeled after those included in EPA regulations implementing the exemption under TSCA Section 5(h)(3) for chemical substances manufactured or imported only in small quantities solely for research and development. See 40 C.F.R. 720.36. Persons who manufacture or import a chemical substance

solely for research and development are required to maintain the records specified in 40 C.F.R. 720.78(b). Similarly, EPA had proposed to require recordkeeping to demonstrate compliance with the eligibility criteria for the proposed low risk alternative.

The record keeping and documentation requirements applicable to researchers which EPA has included in the final rule are fully consistent with the requirements of the National Institutes of Health (NIH) "Guidelines for Research Involving Recombinant DNA Molecules." EPA believes that persons following the NIH Guidelines would keep records as part of normal procedures at an institution where Institutional Biosafety Committees are responsible for ensuring the safety of research. Such records are likely to be adequate for meeting the provisions of EPA's final rule. Thus EPA's record keeping and documentation provisions pertaining to the conduct of R&D involving new microorganisms do not increase the burden on researchers.

Burden Associated with Potential Regulatory Restrictions: The final concern with the draft ICR had to do with estimating the costs associated with regulatory restrictions in filing Microbial Commercial Activity Notices (MCANs) under the final rule, and Premanufacture Notices (PMNs) under EPA's existing Policy Statement (51 FR 23313 (June 26, 1986)). EPA specifically solicited public comment in the proposed rule "regarding the economic impacts associated with this proposed rule." 59 FR 45526, 45557 (September 1, 1994). Among other issues, EPA requested information pertaining to the costs associated with filing notices; specifically, "data regarding actual submissions under the current policy, e.g., project development costs, regulatory burdens, development schedules and revenues." Id. EPA received no comments from the public addressing this issue. The Agency cannot therefore be more specific in assessing the impact of regulatory restrictions on the costs of filing MCANs or PMNs.